Notice of Allowability	Application No.	Applicant(s)	
	10/716,188	ALCAZAR ET AL.	
	Examiner	Art Unit	
	Philip B. Tran	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *12/26/2007*.

2. ☒ The allowed claim(s) is/are *7 and 10-34 (renumbered as claims 1-26)*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *attached* .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/Philip B Tran/
Primary Examiner, Art Unit 2155

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Mr. Powell (Reg. No. 53,479), the undersigned, on February 29, 2008.

3. The application has been amended as follows:

IN THE CLAIMS:

The claims of the invention have been amended as follows:

7. (Currently Amended) In a computer system including a display, a user input facility, and an application for presenting user interfaces on the display, one or more page functions being stored on a computer-readable medium as a data type, each page function comprising:

a set of exposed attributes accessible externally to the page function, wherein a first subset of the set of exposed attributes define types of information receivable by the page function, and a second subset of the set of exposed attributes define types of information returnable by the page function, and wherein the exposed attributes that define types of information returnable by the page function are strongly typed;

a set of page function services including an activate service and a complete service, both services being invocable to execute a decision selected from a group consisting of a decision to finish, a decision to show user interface elements, and a decision to create a new page function; [[and]]

user interface elements operable to be displayed on the display [[.]]**;**

wherein the activate service has a set of parameters, each corresponding to one of the first subset of exposed attributes; and

wherein the complete service has a set of parameters, a portion of the set of parameters identifying another page function created by the page function to perform a second task, another portion of the set of parameters corresponding to one of the second subset of exposed attributes.

8. (Canceled)

9. (Canceled)

10. (Original) The page function of Claim 7, further comprising an identifier for identifying each instance of the page function.

11. (Original) The page function of Claim 7, wherein the user interface elements may be selectively displayed on the display.

12. (Currently Amended) In a computer system including a display, a user input facility, and an application for presenting user interfaces on the display, one or more page functions being stored on a computer-readable medium as a data type, a programming system having a computer-readable medium that has stored thereon an architectural software framework, the architectural software framework comprising:

a first data type defined as a page function, the page function comprising:

a set of exposed attributes accessible externally to the page function, wherein a first subset of the set of exposed attributes define types of information receivable by the page function, and a second subset of the set of exposed attributes define types of information returnable by the page function, and wherein the set of exposed attributes are strongly typed;

a set of page function services, wherein the set of page function services including an activate service and a complete service, both services being invocable to execute a decision selected from a group consisting of a decision to finish, a decision to show a user interface page, and a decision to create a new page function; and

user interface elements to be selectively displayed on the display; and

a second data type defined as a frame, the frame comprising:

a set of frame services, wherein the set of frame services includes a navigate service and a finish service, the navigate service being invocable by a first page function to navigate to a second page function to perform a task, and the finish service being invocable by the second page function to communicate to the frame that the task has been performed; and

a frame data structure, wherein the frame data structure stores information that identifies each page function to which the frame has navigated, and shows the originator relationship among page functions [[.]]

wherein the activate service has a set of parameters, each corresponding to one of the first subset of exposed attributes; and

wherein the complete service has a set of parameters, a portion of the set of parameters identifying another page function created by the page function to perform a second task, another portion of the set of parameters corresponding to one of the second subset of exposed attributes.

13. (Currently Amended) A computing environment for displaying user interface elements on an output device in a Web-style manner, the computing environment comprising:

an output device;

an input device; and

a program interface module exposing an interface function that, when invoked:

creates a page function comprising:

a set of exposed attributes, wherein a first subset of the set of exposed attributes defining types of information receivable by the page function, and a second subset of the set of exposed attributes defining types of information returnable by the page function, the exposed attributes defining types of information returnable by the page function being strongly typed;

a set of page function services, wherein the set of page function services including an activate service and a complete service, both services being invocable to execute a decision selected from a group consisting of a decision to finish, a decision to display a user interface page, and a decision to create a new page function; and

user interface elements that may be selectively displayed on the output device; [[and]]

selectively displays the user interface elements of the page function on the output device [[.]]**;**

wherein the activate service has a set of parameters, each corresponding to one of the first subset of exposed attributes; and

wherein the complete service has a set of parameters, a portion of the set of parameters identifying another page function created by the

page function to perform a second task, another portion of the set of parameters corresponding to one of the second subset of exposed attributes.

14. (Original) The computing environment of Claim 13 wherein the exposed interface function is explicitly defined according to a specific type of information returnable by the page function.

15. (Original) The computing environment of Claim 14 wherein the specific type of information returnable by the page function is an integer.

16. (Original) The computing environment of Claim 14 wherein the specific type of information returnable by the page function is a character string.

17. (Original) The computing environment of Claim 14 wherein the specific type of information returnable by the page function is a Boolean value.

18. (Original) The computing environment of Claim 13 wherein the exposed interface function requires a parameter for identifying the specific type of information returnable by the page function.

19. (Original) The computing environment of Claim 18 wherein the exposed interface function is a template-style interface function.

20. (Original) The computing environment of Claim 18 wherein the required parameter for identifying the specific type of information returnable by the page function is an integer identifier, and wherein the specific type of information returnable by the page function is an integer.

21. (Original) The computing environment of Claim 18 wherein the required parameter for identifying the specific type of information returnable by the page function is an character string identifier, and wherein the specific type of information returnable by the page function is an character string.

22. (Original) The computing environment of Claim 18 wherein the required parameter for identifying the specific type of information returnable by the page function is an Boolean identifier, and wherein the specific type of information returnable by the page function is Boolean value.

23. (Original) The computing environment of Claim 13, wherein the first subset of the set of exposed attributes defining types of information receivable by the page function includes an add return delegate function which, when invoked with a parameter identifying a return delegate routine, enables the page function to return its information.

24. (Original) A computer-readable medium having computer-executable instructions which, when executed on a computer system implement an application programming interface module exposing a programming interface, such that when the programming interface is invoked:

creates a page function comprising:

a set of exposed attributes, wherein a first subset of the set of exposed attributes defining types of information receivable by the page function, and a second subset of the set of exposed attributes defining types of information returnable by the page function, the exposed attributes defining types of information returnable by the page function being strongly typed;

a set of page function services, wherein the set of page function services including an activate service and a complete service, both services being invocable to execute a decision selected from a group consisting of a decision to finish, a decision to display a user interface page, and a decision to create a new page function; and

user interface elements that may be selectively displayed on the output device; [[and]]

selectively displays the user interface elements of the page function on the output device [[.]]**;**

wherein the activate service has a set of parameters, each corresponding to one of the first subset of exposed attributes; and

wherein the complete service has a set of parameters, a portion of the set of parameters identifying another page function created by the page function to perform a second task, another portion of the set of parameters corresponding to one of the second subset of exposed attributes.

25. (Original) The programming interface module of Claim 24, wherein the programming interface is explicitly defined according to a specific type of information returnable by the page function.

26. (Original) The programming interface module of Claim 25, wherein the specific type of information returnable by the page function is an integer.

27. (Original) The programming interface module of Claim 25, wherein the specific type of information returnable by the page function is a character string.

28. (Original) The programming interface module of Claim 25, wherein the specific type of information returnable by the page function is a Boolean value.

29. (Original) The programming interface module of Claim 24, wherein the programming interface requires a parameter for identifying the specific type of information returnable by the page function.

30. (Original) The programming interface module of Claim 29, wherein the exposed interface function is a template-style interface function.

31. (Original) The programming interface module of Claim 29, wherein the required parameter for identifying the specific type of information returnable by the page function is an integer identifier, and wherein the specific type of information returnable by the page function is an integer.

32. (Original) The programming interface module of Claim 29, wherein the required parameter for identifying the specific type of information returnable by the page function is a character string identifier, and wherein the specific type of information returnable by the page function is a character string.

33. (Original) The programming interface module of Claim 29, wherein the required parameter for identifying the specific type of information returnable by the page

function is an Boolean identifier, and wherein the specific type of information returnable by the page function is Boolean value.

34. (Original) The programming interface module of Claim 24, wherein the first subset of the set of exposed attributes defining types of information receivable by the page function includes an add return delegate function which, when invoked with a parameter identifying a return delegate routine, enables the page function to return its information.

REASONS FOR ALLOWANCE

4. Claims 7 and 10-34 (renumbered as 1-26) are allowable over the prior art of record.

5. This communication warrants no examiner's reason for allowance, as applicant's reply makes evident the reason for allowance, satisfying the record as whole as required by rule 37 CFR 1.104 (e). In this case, the substance of applicant's remarks in the Amendment filed on 16 December 2007 with respect to the amended claim limitations and further amended claim limitations in the Examiner's Amendment (see attached) point out the reason claims are patentable over the prior art of record. Thus, the reason for allowance is in all probability evident from the record and no statement for examiner's reason for allowance is necessary (see MPEP 13202.14).

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip B. Tran whose telephone number is (571) 272-3991. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Philip B Tran/
Primary Examiner, Art Unit 2155
March 02, 2008